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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Saari
Serial No. To be assigned
Filed: 22 June 2000 Docket No. 602.323USW1
Title: PROCEDURE FOR INTERPROCESS DATA TRANSFER

CERTIFICATE UNDER 37 C.F.R. 1.10:

'Express Mail' mailing number: EL477365581US

Date of Deposit: 22 June 2000

The undersigned hereby certifies that this Transmittal Letter and the paper or fee, as described herein, are being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

By: 

Theresa Jurek

Box PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

- ☒ Patent application including 4 pages of specification, 6 claims and 1 page of abstract
☒ Unsigned Declaration and Power of Attorney
☒ 1 sheets of formal drawings
☒ Other: Preliminary Amendment
☒ Transmittal Sheet
☒ Return postcard

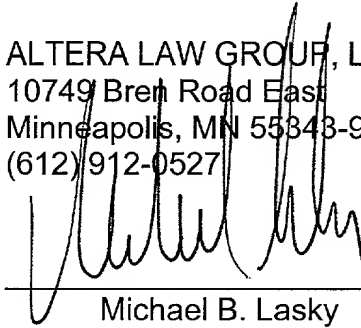
Filing Fees are being deferred

Authorization is hereby given to charge any additional fees or credit any overpayments that may be deemed necessary to Deposit Account Number 50-1038.

Respectfully submitted,

ALTERA LAW GROUP, LLC
10749 Bren Road East
Minneapolis, MN 55343-9056
(612) 912-0527

Dated: 22 June 2000


Michael B. Lasky
Atty. Reg. Number 29,555
MBL/mka

S/N UNKNOWN

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Saari Serial No.: UNKNOWN
Filed: CONCURRENT HEREWITH Docket No.: 602.323USW1
Title: PROCEDURE FOR INTERPROCESS DATA TRANSFER

CERTIFICATE UNDER 37 CFR 1.10

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By: 

Name: Theresa Jurek

PRELIMINARY AMENDMENT

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Please enter the following preliminary amendment into the above-referenced application.

ABSTRACT

Please insert the attached abstract into the application as the last page thereof.

SPECIFICATION

Please insert the following paragraph on page 1 of the specification after the title, and before the first sentence of the specification.

--This application is a Continuation-In-Part of International Application

PCT/FI98/00980 filed 14 December 1998.--

CLAIMS

Please amend the claims as follows:

Please delete claims 1-7. Please insert claims 8-13 as the claims to be examined in this application.

In claim 9, line 1, please replace "claim 1" with --claim 8--.

In claim 10, lines 1-2, please replace "any one of claims 1-2" with --claim 8--.

In claim 11, lines 1-2, please replace "any on of claims 1-3" with --claim 8--.

In claim 12, lines 1-2, please replace "any one of claims 1-4" with --claim 8--.

In claim 13, lines 1-2., please replace "any one of claims 1-5" with --claim 8--.

REMARKS

The above preliminary amendment is made to insert the Continuation-In-Part information into the specification, to insert an abstract page into the application, to insert new claims 8-13 for examination, and to remove the multiple dependencies from those claims.

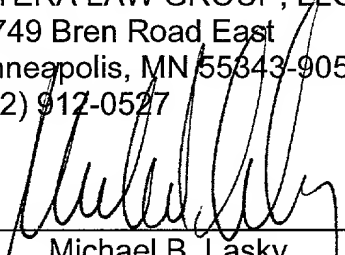
Applicant respectfully requests that this preliminary amendment be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at (952) 912-0527.

Respectfully submitted,

ALTERA LAW GROUP, LLC
10749 Bren Road East
Minneapolis, MN 55343-9056
(952) 912-0527

Dated: 22 June 2000



Michael B. Lasky
Atty. Reg. Number 29,555
MBL/mka

03-04-2000

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CLAIMS

1. Procedure for interprocess data transfer in a telephone exchange system in which processes transmit messages between themselves in order to provide services between processes and in which a first process requests a service from a second process, which, based on the request, starts providing the service to the first process and terminates the service when a predetermined condition is fulfilled, characterised in that the service is refreshed when the first process wishes the service to be continued and when requesting a service, the first process informs the second process that the service request concerns a service to be refreshed.
2. Procedure as defined in claim 1, characterised in that the service parameters given by the first process are saved, and when the second process is started, it provides a service to the first process in accordance with the stored parameters.
3. Procedure as defined in any one of claims 1 - 2, characterised in that the service is refreshed before the requested number of times of service is fulfilled, the service being continued in accordance with the parameters given in the first service request.
4. Procedure as defined in any one of claims 1 - 3, characterised in that the service is refreshed at predetermined time intervals.
5. Procedure as defined in any one of claims 1 - 4, characterised in that the service is removed in a failure and/or overload situation occurring in the telephone exchange system.
6. Procedure as defined in any one of claims 1 - 5, characterised in that the service is introduced by refreshing it, in which case the service is started in accordance with the original parameters.

AMENDED SHEET

PROCEDURE FOR INTERPROCESS DATA TRANSFER

The present invention relates to a procedure for interprocess data transfer as defined in the preamble of claim 1.

- 5 A telephone exchange system comprises several separate processes that communicate between themselves. Data transfer between processes is often tied to a given point of time or a given event. Such an interprocess data transfer event is called a service.
- 10 The services are of a very fixed nature, i.e. they comprise little dynamics. In the present context, the content of the service is of no consequence. A service request remains valid until a certain termination criterion is met; such a criterion may be e.g. a time
- 15 limit, a number of events or a given event.

- However, the management of such services is very difficult. Predetermined termination criteria keep system resources occupied to no purpose because the required duration of service may vary. The need
- 20 for a service may disappear before the service is terminated, which constitutes an unnecessary load on the service provider providing an unnecessary service. If the service is terminated too soon, then the service parameters must be sent again.

- 25 The object of the present invention is to eliminate the drawbacks described above. A specific object of the present invention is to present a new procedure for the management of services.

- 30 As for the features characteristic of the present invention, reference is made to the claims.

- Using the procedure of the invention, a first process requesting a service need not give a new service request to a second process if the service has been used before. A service that has been activated
- 35 earlier can be continued by only refreshing it. Refreshment differs from normal service initiation in that the first process does not send any service pa-

rameters to the second process, but the second process executes the service in accordance with parameters received earlier.

Using the procedure of the invention, refreshment of a service is effected even if the service is not being used. When requesting a service, the first process requesting the service informs the second process providing the service that the service request concerns a service to be refreshed. In this case, the second process saves the service parameters. When receiving a mere refresh message, the second process will be able to offer the correct service to the first process.

Using the procedure of the invention, refreshment of a service is effected when the service is being used. If it has been defined that the service is to be terminated after a certain number of times of service but the service must still be continued beyond this, the service is refreshed before the specified number of times of service is reached. This makes it possible to avoid restarting the service and sending the service parameters over and over again.

Using the procedure of the invention, refreshment of a service can also be effected at suitable intervals. The refresh intervals need not be tied to any given occurrence or to an exact instant of time, but a time is calculated for the process which allows the most effective refreshment of the service. With suitable refresh intervals, the service remains well under control and it is not necessary to send a separate request each time the service is needed.

The procedure of the invention also allows easier operation in failure or overload situations. The service can be removed and then reintroduced by simply refreshing it. When this is done, the service will be started as defined in the first service request.

The present invention provides the advantage that the service duration can be set to a proper value. A separate request is not needed for each service, but by using suitable refresh intervals, the services can be kept well under control. The procedure does not impose a load of unnecessary service on the service provider. In failure and overload situations, services can be removed and reintroduced in a simple manner. The procedure reduces interprocess data transfer relating to service management without impairing the efficiency of the services.

In the following, the invention will be described by the aid of a few examples of its embodiments by referring to the attached drawing, which represents data transfer between two processes.

Let the first process be A and the second process B. A data transfer event between the processes begins when process A requests a service from process B. Process A transmits all the parameters needed in the service to B. This action is represented by arrow 1 in Fig. 1. In accordance with this service request and the parameters received with it, process B starts serving process A, which is represented by arrow 2. When process A finds that the termination criterion for the service is approaching fulfilment, it refreshes the service request to process B, arrow 3. Process B carries on the service to process A in accordance with the original parameters received at the initiation 1 of the service. Process B terminates the service when the predetermined termination criterion has been fulfilled, arrow B. The termination criterion may be e.g. a time limit, a number of events, or a given event, or it may also be a termination request sent by A.

The invention can also be applied e.g. in the case of fixed or permanent services so that the service can be refreshed any time, even when it is not be-

ing used. In this case, the data transfer event begins in the same way as in the previous example with process A requesting a service from process B. Process A now informs process B, besides requesting a service, that the service in question is a service to be refreshed. Process B saves the service parameters. The service can now be terminated when the predetermined termination criterion has been fulfilled. The service termination criterion may be e.g. time, number of services or any one of the parameters of the application to be executed. Next time when process A needs the service from process B, it will only refresh the original service request, and process B will start the service in accordance with the parameters saved when the service was started the first time.

The invention is not restricted to the examples of its embodiments described above, but many variations are possible within the scope of the inventive idea defined by the claims.

CLAIMS

1. Procedure for interprocess data transfer in a telephone exchange system in which processes transmit messages between themselves in order to provide services between processes and in which a first process requests a service from a second process, which, based on the request, starts providing the service to the first process and terminates the service when a predetermined condition is fulfilled, characterised in that the service is refreshed when the first process wishes the service to be continued.

2. Procedure as defined in claim 1, characterised in that, when requesting a service, the first process informs the second process that the service request concerns a service to be refreshed.

3. Procedure as defined in claim 1 or 2, characterised in that the service parameters given by the first process are saved, and when the second process is started, it provides a service to the first process in accordance with the stored parameters.

4. Procedure as defined in any one of claims 1 - 3, characterised in that the service is refreshed before the requested number of times of service is fulfilled, the service being continued in accordance with the parameters given in the first service request.

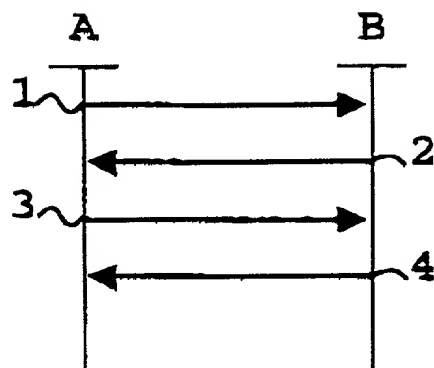
5. Procedure as defined in any one of claims 1 - 4, characterised in that the service is refreshed at predetermined time intervals.

6. Procedure as defined in any one of claims 1 - 5, characterised in that the service is removed in a failure and/or overload situation occurring in the telephone exchange system.

7. Procedure as defined in any one of claims 1 - 6, characterised in that the service is

introduced by refreshing it, in which case the service is started in accordance with the original parameters.

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Altera Law Group, LLC**Declaration and Power of Attorney Patent Application
(Design or Utility)**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PROCEDURE FOR INTERPROCESS DATA TRANSFER

the specification of which

- ☐ is referred to by Altera reference number on a separate document
☒ is attached hereto
☐ was filed on 22 June 2000 as application serial no. _____ and or PCT International Application number _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information know to me to be material to patentability as defined in 37 C.F.R. §1.56.

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) or 35 U.S.C. §365(b) of any foreign application(s) for patent or inventor's certificate, or 35 U.S.C. §365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below any foreign application for patent or inventor's certificate of PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)		
Number 974608	Country Finland	Day/Month/Year Filed 22 December 1997
Number	Country	Day/Month/Year Filed
Number	Country	Day/Month/Year Filed

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below:

Prior Provisional Application(s)	
Serial Number	Day/Month/Year Filing Date
Serial Number	Day/Month/Year Filing Date
Serial Number	Day/Month/Year Filing Date

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s), or under 35 U.S.C. §365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

Prior U.S. or International Application(s)		
Serial Number PCT/FI98/00980	Day/Month/Year Filed 14 December 1998	Status (patented, pending, abandoned) Pending
Serial Number	Day/Month/Year Filed	Status (patented, pending, abandoned)
Serial Number	Day/Month/Year Filed	Status (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Power of Attorney

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Steven R. Funk Reg. No. 37,830
David W. Lynch Reg. No. 36,204
Karen D. McDaniel Reg. No. 37,674

Mark A. Hollingsworth Reg. No. 38,491
Michael B. Lasky Reg. No. 29,555
Iain A. McIntyre Reg. No. 40,337

I hereby authorize them or others whom they may appoint to act and rely on instructions from and communicate directly with the person/organization who/which first sends this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Altera Law Group, LLC otherwise.

Please direct all correspondence in this case to Altera Law Group, LLC at the address indicated below:

Michael B. Lasky
Altera Law Group, LLC
10749 Bren Road East, Opus 2
Minneapolis, MN 55343

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Signature of Inventor		Date